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The Holy Blood and the Holy Grail: myths of scientific racism and the pursuit of excellence in sport

Abstract
Despite the continuing publication of research that suggests there is no scientific basis to 'race' as a biological category, theories of racial difference continue to be invoked within sport to explain the perceived dominance of black athletes. In the case of John Entine's controversial *Taboo: why black athletes dominate sports and why we are afraid to talk about it* or undergraduate textbooks that suggest "racial differences" in physique may significantly affect athletic performance, scientific racism is normalised in sport. In this paper, the relationship between scientific racism and sport will be examined. Qualitative research with current sport scientists is used to investigate the socio-ethical tensions within the subject field of sport science between professionalism, scientism and the demand from external interests to produce results that help people in sport win medals. It will be shown that these tensions, combined with the history of race as a category in sport science, combine to create the discourse of scientific knowledge that reflects, rather than challenges, Marks' (2003) 'folk genetics' of black athletic physicality.

Key Words
Sociology of science, sociology of sport science, history of sport

Introduction

As Hoberman (1997, 2004) has suggested, despite the continuing publication of research that suggests there is no scientific basis to 'race' as a biological category, theories of racial difference continue to be invoked within sport to explain the perceived dominance of black athletes in certain professional sports such as sprint events. From Kane (1971) to the polemical work of Entine (2000), popular literature in sport has publicised ideas about genetic difference and achievement in sport, drawing on scientific papers and using the language of science to bolster their claims. Sociology of sport has provided a powerful critique of the way in which sport normalises beliefs about the essence of racial difference (Cashmore, 1982; Davies, 1990; Hoberman, 1997; Carrington, 1998; Fleming, 2001; St Louis, 2004; Grainger, Newman and Andrews, 2006). However, some sport scientists still claim black sprinters are generally running faster than white sprinters due to their biology, their genetics: it is argued that black people (or "West Africans") are more likely to have more fast-twitch muscle fibres per crucial sprinting muscle than white people, hence making black people better sprinters (Van Damme and Wilson, 2002). Furthermore, racial difference continues to normalised in the teaching of sports science to explain differences in elite performance: in one of the most important textbooks used on sport science undergraduate courses in the United Kingdom, it is claimed that:

> Racial differences in physique may significantly affect athletic performance… compared with whites and blacks, Asian athletes have short legs relative to upper torso components, a dimensional characteristic beneficial in short and longer distance races and in weight lifting" (McArdle, Katch and Katch, 2001, pp. 801-802)

In this paper, the relationship between scientific racism and the sport will be examined alongside the construction of sport science as an academic subject field. It will be argued that ideologies of power and myths about race associated with Social Darwinism underpin both scientific racism and the development of modern sport at the end of the Nineteenth Century. This mythology I identify through the symbol of Holy Blood: the belief that blood, heredity, genes, constitute a biological essence that defines individuals. This myth of Holy Blood, I will suggest, is part of the way we construct the bio-social networks around us. The fiction of Jesus having a child with Mary Magdalene becomes a best-selling book and film only because of the assumption that his Holy Blood could remain pure through two thousand years of mothers and children. And with Holy Blood comes biological thinking, and racial thinking, so black professional rugby league players, for example, are picked on the wing and in other positions of speed and strength, but not in decision-making positions (even when these players start out in such positions – see Long, Carrington and Spracklen, 1997; Spracklen, 2001).

Throughout this paper, I will refer to qualitative research I conducted over a period of sixteen months with sport scientists at four universities in the United Kingdom. This research was undertaken to explore how sport scientists themselves understood their own professional identity and their subject field's relationship to science, to sport and to claims about 'race'. The universities were selected to ensure a representative balance of institutions and sport science departments: a traditional university with a small sport science department (referred to hereon as Redbrick University); a new university with a tradition of sport science teaching and a strong sports profile (Campus University); an ex-Polytechnic with a strong sport science research profile

(Sporting University); and another ex-Polytechnic with an emerging research profile (Developing University). In total, sixteen sport scientists were interviewed using a semi-structured technique, identified through contacts I had made through the Leisure Studies Association and other professional activity, or through a process of snowball sampling. The sixteen were all early career sport scientists, chosen because of their relative availability compared to researchers at the level of Reader or Professor, and the sampling process ensured a gender balance and an approximate balance of specialisms (across the sport science sub-fields of physiology, psychology, and biomechanics). Naturally, for ethical reasons, pseudonyms are being used for the universities and the respondents, and my own university was not part of the research. These interviews helped me to investigate the socio-ethical tensions within the subject field of sport science between professionalism, scientism and the demand from external interests to produce results that help people in sport win medals. This demand or pressure is what I have symbolised as the Holy Grail: the pursuit of glory, and the quest to be bigger, faster, stronger, whatever the cost. This, I will argue, is the primary rationale for sport science, despite the tensions between the Grail's instrumentality and the desire of sport scientists to be viewed as 'proper', objective, value-free scientists.

Value-free science?

I will take as my sociology of science starting point a methodological and theoretical stance based on the work of Bruno Latour (1987), but this stance will not be uncritical. Following Hacking (2000), I want to use Latour's concern with representations of nature(1) to examine the way in which public debates about science are defined and shaped by reference to assumptions about the epistemology of science and the scientific method. What I am interested in is the way in which science is like a show staged by a celebrity magician: we are told to look at the hand, and in doing so we miss the sleight of the other hand as the card passes from table to pocket. Scientists use a similar method of misdirection to the magician (Fuller, 2000a, 2000b): the public face of the scientist is that of the objective Baconian, gathering facts and expressing final judgements on the truth of ideas in carefully-managed, peer-reviewed papers; but behind the public face is the messy nature of actual science practice (what Latour, 1987, calls the black box of science): the struggle to gain funding for research, negotiations with industry, bidding for work, getting experiments to work, and creating *ad hoc* hypotheses that fit the data and the demands of the funders. So, for example, a sport scientist funded by a fast-food corporation to investigate the causes of obesity may say, in an academic journal, that the primary cause of obesity is the lack of exercise – how that conclusion was reached, and the pressure to meet that conclusion from the funders of the research, is never fully revealed in the pure discourse of the scientific paper.

The purpose and meaning of sport science

Beamish and Ritchie (2006) have traced the development of sport science as an ancillary to the growth of professionalised sports practices in the Twentieth century. With the emergence of professional sports in the last quarter of the Nineteenth century, the pursuit of success overshadowed the middle-class morality of amateurism, where playing the game was all that counted. Social Darwinist attitudes to science, coupled with modernist Western European beliefs in the power of science (LaFollette, 1990), soon led to the emergence of university-based sport science in the 1930s, initially split into (and drawing from research in) sub-disciplines of

physiology, biomechanics and nutrition, with the later emergence of sport psychology in the last quarter of the Twentieth century (Beamish and Ritchie, 2006).

The growth of the discipline of sport science can be traced alongside the growth of professional sport and professionalised coaching methods. In the Cold War period, in particular, rationalised programmes of elite sports development were funded by nation-states in the pursuit of victory in international competitions (Green and Houlihan, 2005). Elite sport became a site for the sublimation of global conflict, for the construction of national identity and the maintenance of white, masculine hegemonies (Collins, 2006; Mangan and Ritchie, 2005)(2). Sport science played a crucial role in helping governments and sports associations to identify athletes at an early age, to develop them and build them into the Frankensteinian monsters of elite sport, to give them that winning edge. It is this pursuit of glory, this Quest for the Holy Grail of the gold medal, that defines the development and continued existence of sport science. With the increasing globalisation and commodification of sport, the demands on sport science to produce results has led to a proliferation, in the last twenty years, of sport science research centres, University departments and taught courses. Alongside this institutional growth, professional bodies such as the British Association of Sport Scientists (BASS - established 1984) have emerged to provide networks of support and contacts for sport scientists, and a number of academic journals(3) now focus specifically on sport science or its sub-disciplines. With the expansion of academic, professional and political interest in the link between sport, physical activity and health, BASS became the British Association of Sport and Exercise Scientists in 1993.

For the sport scientists I interviewed, sport science's purpose was clear. All of the respondents suggested that one of sport science's main aims was to help sport's elite performers improve their performance, and ten of them were themselves undertaking research or consultancy that had some benefit to elite sport. A blurring between academic research and practical consultancy or contract research demonstrated the way in which the scientists were seen as expert helpers by sport. At Campus, for example, Scientist A was supporting a particular sports governing body elite athlete development, as well as conducting his own postgraduate research around the biomechanics of power. Scientist B, at Developing University, was not doing any academic research (though he expressed a desire to start such work), but he did generate significant income for the institution through his consultancy helping elite athletes through applied psychology. Scientist C, at Sporting, was one of the minority of scientists whose work was not directly applicable to elite performance. His doctorate was concerned with the "exercise" element of the Sport and Exercise Science discipline, using physiological testing to measure effectiveness of health programmes with young people. However, he acknowledged that:

> Most of my colleagues here focus on performance, that's where it [the subject field] came from, finding out how to get that top one per-cent of performers… make them better… my work is maybe the rest of sport, getting kids playing, healthier… there's still a definite bias in sport science towards the top end, it's where the glamour is… it's what gets most people into it [sport science] in the first place.

Sport science, then, is clearly seen by sport scientists as being a subject field with a distinct application: identifying elite athletes, finding ways in which one athlete can beat another, or as Scientist D at Redbrick put it: "that fraction of a second between

success and failure". In the first issue of BASES's own membership magazine, this was made clear by key members of the BASES Executive. Craig Sharp suggested sport science's key job was gaining the trust of elite athletes and coaches by showing them "the lab workers were doing their utmost to help them" (The Sport and Exercise Scientist 1, Sep 2004: p. 14), and new Chair Craig Mahoney explained sport science played "a pivotal role in taking forward the boundaries of knowledge that can be applied to improving performance of elite performers" (ibid.: p. 27).

For most sport scientists, their science was easily recognisable as an applied science, servicing sport. Most of the respondents were themselves keen sport participants, often to a sub-elite or elite level, and with one exception they had entered sport science through sports-related undergraduate studies. For most of the respondents, sport science by definition and history was applied. However, for some, this applied nature was problematic. Scientist E at Redbrick acknowledged the potential dangers to her research when meeting a perceived need:

> You have to be careful you don't compromise your independence by doing research for someone… who might be interested in selling their product to coaches, some supplement. But then again, you might get [a national governing body of sport] who want an easy answer, a way to get a win, and if we can't give them that, it does cause tension

Sport science, then, is not merely about serving sport and elite performers. There is an inevitable tension between a number of competing interests, with sport scientists in the middle trying to reconcile the tensions. Professional academic institutions have codes of conduct that help individuals reconcile these tensions. BASES, for example, has a Code of Conduct that clearly states (BASES, 2006: para 7.g, p. 2): "Members must be totally unbiased and objective in their practices and actions". Athletes, coaches, sports governing bodies, governments and companies that might be able to make a profit on a magic pill are all interested in the research outputs of sport science, but at the same time (as a number of respondents commented), these external interests are often unwilling (or unable) to understand the way in which sport science resolves internal (Latourian) tensions between application/service and the professional aim to be recognised as 'proper' science.

'Race' and sport science

In asking the scientitss to think about what makes sport science a science, I also discussed the nature and their understanding of controversy. The example I used to start the discussion was the 'controversy' of racialised claims about black people in sprint events: that black athletes' racial difference has endowed them with more high-density, fast-twitch muscle fibre (Entine, 2000). There was a clear consensus about this controversy: any research that made a claim had to be backed up by more research, and that research would then have to be tested and examined through the peer-review and publication process. No respondent expressed the view that the 'race' controversy was predicated on racism. One respondent seemed to think that there could be "something" in the research, though others were quick to condemn the claims as being "unproven". The respondents all believed that controversy was inevitable, and resolvable through appeal to the norms of science. What was interesting, however, was the way in which the 'race' controversy was seen as unresolved - unproven, rather than untrue – whereas other controversies were seen to be resolved (or resolvable) by recourse to the opinions and power of key figures in the scientific community such as anonymous readers, editors, and high-profile

researchers. What no-one challenged was the tacit normalisation of ‘race’ inherent in the controversy. Two of the respondents admitted that the question of black athletic superiority was problematic because it was difficult to identify and isolate different racial types, but for the other respondents the belief in Holy Blood led them to believe in the typology of ‘race’. One respondent said “it could be possible to measure the impact of ‘race’ on performance… it might be just one factor, but an important one... it is important to look at all these things”. Another stressed the importance of blood and biology “on performance in general” made her cautious about rejecting claims about ‘race’ outright. As another respondents claimed:

> We should never be politically correct about it [‘race’], it is a question that needs to be answered.

As Fleming (2001), Marks (2003), Hoberman (2004) and St Louis (2004) argue, the prevalence of these sorts of questions in sport is evidence that people in sport (coaches, administrators, fans, athletes and scientists) are asking the wrong sorts of questions. The fact of black dominance in sprint events can be explained entirely due to social and cultural reasons (4). The problem with ‘race’ as a category is the movement of people in the last four hundred years (through colonisation, commerce, slavery), and especially in the last one hundred years (through globalisation, industrialisation and migration), has made racial categories impossible to sustain in any useful or meaningful sense (Banton, 1998). There are no discernible genetic differences between ‘black’ people and ‘white’ people (Franks, 2007). Phenomes (eg, the ability to be an elite sprinter) cannot be mapped on a one-on-one basis onto genomes (genetics), so there can’t be a causal link associated with heredity (Hoberman, 2004). That is not to deny that there are clusters of populations that are more or less likely to be carriers of particular genetic information(5), but the existence of such clusters is not the basis for an ontology of racial difference (Skinner, 2006). Indeed, the caution with which claims about particular populations are made suggests that such clusters are dynamic, partial and rare. The burden of proof has to be on those who do make claims of racial difference (Shim, 2005). What is happening is a category error: scientists assume races exist because the myth of the Holy Blood makes ‘race’ normal and unproblematic, and experiments are designed on that basis. Hence the gobbledigook of claiming, as in the fast-twitch muscle fibre experiments cited by Entine (2000), that Afro-Americans (a diverse group) are defined as West Africans. What Entine is actually showing is that most successful sprinters are American, and the best sprinters have more fast-twitch fibre.

As the interviews in this research note suggest, sport science is still driven by external interests: funding is concentrated on the pursuit of the Holy Grail, on research and subjects that improve performance at an elite level. It is the tensions in the Latourian black-box between evidence-based knowledge and the desire to explain, predict and improve performance that allow the ‘race’ controversy to continue. In the pursuit for the Holy Grail, sport scientists will remain open to any theory or claim that helps them understand and predict improvements in performance. The link between modern sport and the myth of the Holy Blood (Hoberman, 2004; Skinner, 2006) makes scientific racism, already part of the discourse of sport (Fleming, 2001; St Louis, 2004), unproblematic in the pursuit of the Grail.

Notes

1 Here I am following what could be described as the Hacking interpretation of Latour (Hacking, 2000), interpreting Latour's statements as being statements about representation (epistemology) not reality (ontology).
2 See Miller (1998) for the way in which sterotypes of black laziness were replaced in the 1930s by notions of black physicality based on emerging scientific study of sport and the body.
3 Such as the Journal of Sport Science. A rough content analysis of one journal's contents over the last three years indicates that approximately 80% of the research it published is designed to solve problems about elite sport preformance.
4 This, of course, is the generally accepted sociological and historical explanation in sport studies.
5 For instance, the increased likelihood of sickle-cell anaemia in black British and Afro-American families (Frank, 2007).

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